

Remarks

The Final Office Action dated July 23, 2010 indicated the following rejections: claims 1-2, 7-23 and 29-30 stand rejected under 35 U.S.C. § 102(b) over Croft (U.S. Patent No. 6,201,874); and claims 3-6 and 29-30 stand rejected under 35 U.S.C. § 103(a) over the '874 reference. Applicant understands that the objections of record have been removed, and further acknowledges the Examiner's indicated allowance of claims 24-28.

Applicant traverses all of the rejections and, unless stated by the Applicant, does not acquiesce to any objection, rejection or averment made in the Office Action. Moreover, as the instant rejections largely repeat the previous rejections, and as the Response to Arguments section fails to address all of Applicant's traversals, Applicant fully incorporates its traversals of record herein. As particularly noteworthy, the Examiner has not addressed Applicant's traversals regarding the lack of correspondence in the cited references to an untensioned diaphragm and corresponding operation thereof. As noted by Applicant in the record, the cited reference uses a rigid, molded diaphragm that fails to correspond as asserted. Accordingly, Applicant's traversals stand largely uncontested in the record (for Appeal).

The § 102(b) and § 103(a) rejections are also improper because they rely upon the Examiner's unsupported opinion that it "would have been obvious" to modify the (solely-cited) '874 reference, instead of citing any reference disclosing the configuration and/or materials that the Examiner acknowledges as missing in the '874 reference. Despite Applicant's traversals identifying these improprieties, the Examiner's Response to Arguments continues to rely upon assertions of correspondence without citation to any reference. For example, page 6 of the instant Office Action suggests that the cited diaphragm in the '874 reference would somehow be structurally reconfigured in accordance with the claimed diaphragm, simply because the reference "does not restrict the diaphragm in any configuration." Page 6 of the instant Office Action further suggests that the '874 reference's diaphragm would be replaced with a diaphragm having materials as in the claimed invention, simply because the '874 reference "does not restrict any material." These assertions fail to comply with either § 102(b) or § 103(a), and thus fail to establish correspondence to the claimed invention. The following addresses these and other matters in greater detail, including those as presented in Applicant's previous

response of record, which have not been addressed in the instant Office Action in contrast with to the requirements of M.P.E.P. § 707.07(f).

As consistent with the above, the § 102(b) and § 103(a) rejections of all claims are improper because the solely-cited '874 reference fails to teach the claimed invention "as a whole" including aspects regarding, *e.g.*, an audio speaker device having a diaphragm configured in shape and material as claimed. As a more specific example, the '874 reference fails to disclose a diaphragm "arranged substantially untensioned" between chamber walls in an inactive operating state, and an audio driver circuit that imposes "a deformation on the diaphragm via mechanical tension to generate audible sound" in an active operating state (*e.g.*, as in claim 1). As another example, the '874 reference fails to disclose such a diaphragm having a "metal foil," "dielectric material," "piezoelectric material" or an "electrode" (*see, e.g.*, claims 3-6). Because the Office Action has failed to cite a reference that teaches these aspects of the claimed invention, no reasonable interpretation of the asserted prior art, taken alone or in combination, establishes correspondence.

Specifically regarding the § 103(a) rejections of claims 3-6 over the sole '874 reference, Applicant submits that the Office Action's assertion that missing limitations are "well known" without any supporting evidence from the prior art is insufficient to establish a *prima facie* case of obviousness. The Examiner has acknowledged that the '874 reference fails to disclose limitations in these claims directed to different types of diaphragms, but simply asserts that these limitations are "well known" instead of citing corresponding references as required under § 103(a).

The § 103(a) rejections of claims 3-6 are further improper because the '874 reference teaches away from the proposed modification as would render the reference inoperable for its purpose. As consistent with the recent *KSR*¹ decision, M.P.E.P. § 2143.01 explains the long-standing principle that a § 103 rejection cannot be maintained when the asserted modification undermines either the operation or the purpose of the main '805 reference - the rationale being that the prior art teaches away from such a modification. As applicable here, the '874 reference requires a specific type

¹ *KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1742 (2007) ("[W]hen the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be non-obvious.")

of molded/rigid material for its conventional speaker diaphragms, and the allegedly “obvious” modifications would not comply with this requirement. Referring to FIG. 1 and column 4:11-14 and 35-38 of the ‘874 reference, the disclosed diaphragm is of a molded shape having peaks and valleys in its natural state, which can be set by molding or other methods.

Despite Applicant’s traversals pointing out this lack of correspondence, the instant Office Action is silent as to how the recited structures (*e.g.*, a metal film) would be molded or otherwise shaped in accordance with the purpose of the ‘874 reference. Referring to the figures in the instant application and as consistent with many embodiments, the diaphragms shown may lie flat along one or the other of the electrode walls. Applicant’s background discussion further characterizes undesirable aspects of molded/rigid speaker diaphragms as in the ‘874 reference. The Office Actions of record have thus failed to provide any evidence supporting the apparent notion that the ‘874 reference would be capable of functioning with diaphragms as proposed. Moreover, based upon Applicant’s review, the ‘874 reference fails to disclose such materials or operational approaches. As Applicant’s traversals regarding this lack of correspondence now stand uncontested, the rejections cannot be maintained. Accordingly, Applicant requests that the § 103(a) rejections of claims 3-6 be removed.

More specifically regarding the § 102 rejections and as also consistent with the above discussion, the cited molded (*e.g.*, pre-tensioned) diaphragm-type device in the ‘874 reference also fails to correspond to the claimed invention as asserted. The molded diaphragm used in the ‘874 reference, as is common to many prior speakers, is set in a pattern of peaks and valleys that deform in a “push pull” type of operation (see FIG. 2). This molded form is effected in different manners to impart a shape to the diaphragm (*e.g.*, by heating and/or some sort of tensioning/molding). Accordingly, the ‘874 reference fails to correspond to claim limitations directed to an audio speaker device having a diaphragm that is substantially untensioned as in the independent claim 1.

The § 102 rejections of all claims that depend from claim 1 are also improper as the cited ‘874 reference further fails to disclose various limitations therein. Despite Applicant’s traversals identifying the (previous) Office Action’s failure to cite correspondence to these limitations, the instant Office Action is silent as to this matter. For example, the single

paragraph addressing the rejection of claims 1, 7, 9, 13, 18, 19 and 23 discusses certain limitations in the independent claims, but fails to specifically address multiple limitations in the dependent claims. As one example, the Office Action has failed to establish that the '874 reference discloses a speaker device having a diaphragm and drive in which the drive "imposes a cyclic deformation in the form of a traveling wave on the diaphragm" as in claim 14. The instant Office Action appears to have again overlooked these limitations in failing to assert any correspondence in the rejection. In addition and as discussed above, the diaphragm in the '874 reference is pre-molded in a series of peaks/valleys, and this pre-molded shape is pushed or pulled in order to operate the device. The diaphragm thus appears to be incapable of operating in a traveling wave (*e.g.*, in which the diaphragm would be cyclically deformed in a wave pattern) as claimed.

Claim 1 has been amended to correct an informality, in adding a comma at line 7. Claims 2, 8, 13, 14 and 20 have been amended for readability, to address missing terms (such as "a"), and for consistency with previous claims from which the claims depend. Applicant believes that these amendments are not required for patentability and do not narrow the scope of the claims.

In view of the above, Applicant believes that each of the rejections/objections has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the agent overseeing the application file, David Schaeffer, of NXP Corporation at (212) 876-6170.

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